

AMENDMENTS TO THE CLAIMS:

Please amend the claims to read as follows:

Listing of Claims:

- 1 1. (Currently Amended) A circuit, comprising:
2 a filter processing element reconfigurable to process a signal by use of a at least one
3 process selected from a group ~~consisting~~ comprising of digital filtering, adaptive equalization,
4 resampling, despreading, and fast-Fourier transforming;
5 at least one decoding processing element to decode and correct errors in said signal;
6 a general purpose processing element to process said signal by use of ~~an encoding~~ at least
7 one code process selected from a reconfiguration group ~~consisting~~ comprising of deinterleaving,
8 descrambling, cyclic redundancy checking, convolutional encoding, Reed-Solomon encoding,
9 turbo encoding, and Trellis encoding; and
10 one or more control units to direct the operations of the processing elements according to
11 a first set of protocols,
12 wherein the processing elements are coupled in a network.
- 1 2. (Currently Amended) The circuit of claim 1, wherein said ~~decode of said~~ at least one decoding
2 processing element includes a at least one decode process selected from a reconfiguration group
3 ~~consisting~~ comprising of a first forward error correction decoding, Reed-Solomon forward error
4 correction decoding, turbo decoding, Trellis decoding, and Viterbi decoding.

1 3. (Original) The circuit of claim 1, wherein said one or more control units are implemented in
2 said filter processing element.

1 4. (Currently Amended) The circuit of claim 1, wherein said one or more control units are
2 implemented in said at least one decoding processing element or said general purpose processing
3 element.

1 5. (Original) The circuit of claim 1, wherein said one or more control units reconfigure the
2 processing elements to operate according to a second set of protocols.

1 6. (Currently Amended) The circuit of claim 5, wherein either of said first set and said second set
2 of protocols include parameters for operation within a network selected from a group ~~consisting~~
3 comprising of a wired network, a wireless network, a local area network, a wide area network,
4 and an optical network.

1 7. (Original) The circuit of claim 1, wherein said network further includes one or more routers.

1 8. (Currently Amended) The circuit of claim 1, further comprising:
2 a communications interface to couple said processing elements to said network; and
3 a supplemental processing element to transmit said signal on a communications path[.])
4 coupled to said ~~communications infrastructure by~~ network via said communications interface,

5 wherein said supplemental processing element receives said signal after processing by said
6 processing elements.

1 9. (Original) The circuit of claim 8, wherein said communications interface includes at least one
2 data router adapter.

1 10. (Currently Amended) A method, comprising:
2 determining operations of one or more reconfigurable processing elements according to a
3 first set of protocols;
4 receiving a signal from a network at a reconfigurable filter processing element;
5 processing said signal at said filter processing element by use of a at least one process
6 selected from a reconfiguration group ~~consisting~~ comprising of digital filtering, adaptive
7 equalization, resampling, despreading, and fast-Fourier transforming;
8 decoding said signal to decode and correct errors in said signal by at least one decoding
9 processing element; and
10 processing said signal by a general purpose processing element by use of ~~an encoding at~~
11 least one code process ~~processing~~ selected from a reconfiguration group ~~consisting~~ comprising of
12 deinterleaving, descrambling, cyclic redundancy checking, convolutional encoding, Reed-
13 Solomon encoding, turbo encoding, and Trellis encoding.

1 11. (Currently Amended) The method of claim 10, wherein ~~said decode of~~ said at least one
2 decoding processing element ~~includes~~ is reconfigurable to perform a at least one decode process

3 selected from a reconfiguration group ~~consisting~~ comprising of a first forward error correction
4 decoding, Reed-Solomon forward error correction decoding, turbo decoding, Trellis decoding,
5 and Viterbi decoding.

1 12. (Original) The method of claim 10, wherein said one or more control units are implemented
2 in said filter processing element.

1 13. (Currently Amended) The method of claim 10, wherein said one or more control units are
2 implemented in said at least one decoding processing element or said general purpose processing
3 element.

1 14. (Original) The method of claim 10, wherein said one or more control units reconfigure the
2 processing elements to operate according to a second set of protocols.

1 15. (Currently Amended) The method of claim 14, wherein either of said first set and said second
2 set of protocols include parameters for operation within a network selected from a group
3 ~~consisting~~ comprising of a wired network, a wireless network, a local area network, a wide area
4 network, and an optical network.

1 16. (Original) The method of claim 10, wherein said network further includes one or more
2 routers.

1 17. (Original) The method of claim 10, further comprising:

2 transmitting said signal by a supplemental processing element on a communications path
3 after said signal is processed by said processing elements,

4 wherein a communications interface couples said processing elements to said network,
5 and wherein said network couples said supplemental processing element to said communications
6 interface.

1 18. (Original) The method of claim 17, wherein said communications interface includes at least
2 one data router adapter.

1 19. (Currently Amended) A ~~machine-readable~~ computer-readable medium that provides
2 instructions, which when executed by a processing element, cause the processing element to
3 perform operations comprising micro-coded accelerator based operations of:

4 receiving a signal from a network at a reconfigurable filter processing element;

5 processing said signal at said filter processing element by use of a at least one process
6 selected from a reconfiguration group ~~consisting~~ comprising of digital filtering, adaptive
7 equalization, resampling, despreading, and fast-Fourier transforming;

8 decoding said signal to decode and correct errors in said signal by at least one decoding
9 processing element; and

10 processing said signal by a general purpose processing element by use of an ~~encoding~~ at
11 least one code process ~~processing~~ selected from a reconfiguration group ~~consisting~~ comprising of

12 deinterleaving, descrambling, cyclic redundancy checking, convolutional encoding, Reed-
13 Solomon encoding, turbo encoding, and Trellis encoding.

1 20. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 19,
2 wherein ~~said decode of~~ said at least one decoding processing element ~~includes~~ is reconfigurable
3 to perform a at least one decode process selected from a reconfiguration group ~~consisting~~
4 comprising of a first forward error correction decoding, Reed-Solomon forward error correction
5 decoding, turbo decoding, Trellis decoding, and Viterbi decoding.

1 21. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 19,
2 wherein said one or more control units are implemented in said filter processing element.

1 22. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 19,
2 wherein said one or more control units are implemented in said at least one decoding processing
3 element or said general purpose processing element.

1 23. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 19,
2 wherein said one or more control units reconfigure the processing elements to operate according
3 to a second set of protocols.

1 24. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 23,
2 wherein either of said first set and said second set of protocols include parameters for operation

3 within a network selected from a group ~~consisting~~ comprising of a wired network, a wireless
4 network, a local area network, a wide area network, and an optical network.

1 25. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 19,
2 wherein said network further includes one or more routers.

1 26. (Currently Amended) The ~~machine-readable~~ computer-readable medium according to claim
2 19, providing further instructions, which when executed by a processing element, cause the
3 processing element to perform a further operation of:
4 transmitting said signal by a supplemental processing element on a communications path
5 after said signal is processed by said processing elements,
6 wherein a communications interface couples said processing elements to said network,
7 and wherein said network couples said supplemental processing element to said communications
8 interface.

1 27. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 26,
2 wherein said communications interface includes at least one data router adapter.